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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/735,401

12/12/2000

Eckhard Alt

IFD/046

4641

490

7590

07/19/2004

VIDAS, ARRETT & STEINKRAUS, P.A.

6109 BLUE CIRCLE DRIVE

SUITE 2000

MINNETONKA, MN 55343-9185

EXAMINER

THALER, MICHAEL H

ART UNIT

PAPER NUMBER

3731

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/735,401	Applicant(s) ALT, ECKHARD	
	Examiner Michael Thaler	Art Unit 3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 61,64,65 and 68-87 is/are pending in the application.
- 4a) Of the above claim(s) 83 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 61,64,65,68-82 and 85-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 83 and 84 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP 821.03.

Claims 61, 64, 65 and 68-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 61, line 7, "a cross-section substantially of a two-dimensional biconcave disc shape" is indefinite since a cross-section, which has two dimensions, cannot have a shape of a structure which has three dimensions (such as a biconcave disc). For example, a cross section may have a shape of a square (which has two dimensions) but may not have of a cube (which has three dimensions). Further, it appears that "two-dimensional" used in this phrase incorrectly refers to the object in which the cross-section is taken (which is three-dimensional) rather than the cross-section itself. Claim 65 is indefinite for the same reason.

Claims 61, 64, 65, 68-71, 76-78 are rejected under 35 U.S.C. 102(b) as being anticipated by Fontaine (5,370,683). Fontaine, in figures 10-12, shows a stent having a wall with a multiplicity of holes formed therethrough, the tubular wall defined by a plurality of struts. As to the phrase "a cross-section substantially of a two-dimensional biconcave disc shape"

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(as best understood) in claim 61, lines 3-4, the cross-section of a biconcave disc taken in a plane which is perpendicular to the axis of the disc is a filled-in circle. Fontaine shows the cross-section of the struts as circular (i.e. a filled-in circle), thus meeting this term as broadly claimed. As to claims 69 and 76, Fontaine discloses a plurality of serpentine bands (each of the windings of the helical coil), each of the bands being a continuous structure (since they are formed of a single piece of material) and a closed structure (Each winding forms a ring which is closed since it is attached to the adjacent winding. Each ring is closed in the same sense that a conventional key ring formed of a helical wire is closed). As to claims 71 and 78, Fontaine shows a connector (one of the intermediate windings of the helical coil).

Claims 72, 73, 79, 80 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontaine (5,370,683) in view of Sawyer (5,108,417). Fontaine fails to disclose the claimed taper. However, Sawyer teaches that a stent should have a taper (figure 3) in order to increase the velocity of the blood and thus reduce the possibility of thrombosis (col. 4, lines 26-54). It would have been obvious to include a taper in the Fontaine stent so that it too would have this advantage. As to claim 85, the Sawyer stent tapers from the midpoint to one end of the

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stent at a substantially constant slope in relation to the longitudinal axis.

Claims 74, 75, 81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontaine (5,370,683) in view of Marin et al. (5,397,355). Fontaine fails to disclose the claimed taper. However, it is well known in this art to provide a taper on the exterior surface of stents. For example, Marin et al. teach that the outer diameter of a stent should have a taper (at 18) in order to anchor the stent within the blood vessel and also facilitate smooth passage within a blood vessel when barbs 18 are unexpanded. It would have been obvious to include a taper in the Fontaine stent (i.e. barbs which form a taper in the stent) so that it too would have this advantage.

Claims 86 and 87 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (5,449,384). Johnson, in figure 15, discloses a stent 622 (noting that the frame of the valve is disclosed as being a "stent" in view of the phrase "stent or frame" in col. 1, lines 13-15) comprising a plurality of interconnected struts (noting struts 210, 212 and 214 of the figure 3 embodiment and the statement that the frame of the figure 15 embodiment is similar to the frame of the figure 3 embodiment in col. 5, lines 32-35), portions of the struts

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having a cross-section which includes a necked region (at the cross-member of the H-shape).

Applicant's arguments filed May 3, 2004 have been fully considered but they are not persuasive for the reasons set forth above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael

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Thaler whose telephone number is (703) 308-2981. The examiner can normally be reached Monday to Friday.

The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0858.

mht
7/13/04



MICHAEL THALER
PRIMARY EXAMINER
ART UNIT 3731